## DISCLAIMER

The full text of certain NPDES permits and the associated fact sheets has been made available to provide online access to this public information. EPA is making permits and fact sheets available electronically to provide convenient access for interested public parties and as a reference for permit writers. The ownership of these documents lies with the permitting authority, typically a State with an authorized NPDES program.

While EPA makes every effort to ensure that this web site remains current and contains the final version of the active permit, we cannot guarantee it is so. For example, there may be some delay in posting modifications made after a permit is issued. Also note that not all active permits are currently available electronically. Only permits and fact sheets for which the full text has been provided to Headquarters by the permitting authority may be made available. Headquarters has requested the full text only for permits as they are issued or reissued, beginning November 1, 2002.

Please contact the appropriate permitting authority (either a State or EPA Regional office) prior to acting on this information to ensure you have the most up-to-date permit and/or fact sheet. EPA recognizes the official version of a permit or fact sheet to be the version designated as such and appropriately stored by the respective permitting authority.

The documents are gathered from all permitting authorities, and all documents thus obtained are made available electronically, with no screening for completeness or quality. Thus, availability on the website does not constitute endorsement by EPA.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAWN R. GALLAGHER
COMMISSIONER

Thomas Griffin
Environmental Manager
S.D. Warren Company – Somerset Operations
1329 Waterville Road
Skowhegan, ME. 04976

September 12, 2003

RE: Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0021521
Maine Waste Discharge License (WDL) #W000385-5N-G-R
**Final Permit/License**

Dear Tom:

Enclosed please find a copy of your **final** MEPDES permit and Maine WDL **renewal** which was approved by the Department of Environmental Protection. This permit/license replaces the National Pollutant Discharge Elimination System (NPDES) permit #ME0021521, last issued by the Environmental Protection Agency (EPA) on September 24, 1987. Please read the permit/license renewal and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

We would like to make you aware of the fact that your monthly Discharge Monitoring Reports (DMR) may not reflect the revisions in this permitting action for several months. However, you are required to report applicable test results for parameters required by this permitting action that do not appear on the DMR. Please see the attached April 2003 O&M Newsletter article regarding this matter.

If you have any questions regarding the matter, please feel free to call me at 287-7693.

Sincerely,

Gregg Wood
Division of Water Resource Regulation
Bureau of Land and Water Quality

Enc.
cc: Denise Behr, DEP/CMRO Ted Lavery, USEPA

AUGUSTA
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## DMR Lag

When the Department renews discharge permits, the parameter limits may change or parameters may be added or deleted. In some cases, it is merely the replacement of the federally issued NPDES permit with a state-issued MEPDES permit that results in different limits. When the new permit is finalized, a copy of the permit is passed to our data entry staff for coding into EPA's Permits Compliance System (PCS) database. PCS was developed in the 1970's and is not user-friendly. Entering or changing parameters can take weeks or even months.

This can create a lag between the time your new permit becomes effective and the new permit limits appearing on your DMRs. If you are faced with this, it can create three different situations that have to be dealt with in different ways.

1. If the parameter was included on previous DMRs, but only the limit was changed, there will be a space for the data. Please go ahead and enter it. When the changes are made to PCS, the program will have the data and compare it to the new limit.

2. When a parameter is eliminated from monitoring in your new permit, but there is a delay in changing the DMR, you will have a space on the DMR that needs to be filled. For a parameter that has been eliminated, please enter the space on the DMR for that parameter only with "NODI-9" (No Discharge Indicator Code #9). This code means monitoring is conditional or not required this monitoring period.

3. When your new permit includes parameters for which monitoring was not previously required, and coding has not caught up on the DMRs, there will not be any space on the DMR identified for those parameters. In that case, please fill out an extra sheet of paper with the facility name and permit number, along with all of the information normally required for each parameter (parameter code, data, frequency of analysis, sample type, and number of exceedances). Each data point should be identified as monthly average, weekly average, daily max, etc. and the units of measurement such as mg/L or lb/day. Staple the extra sheet to the DMR so that the extra data stays with the DMR form. Our data entry staff cannot enter the data for the new parameters until the PCS coding catches up. When the PCS coding does catch up, our data entry staff will have the data right at hand to do the entry without having to take the extra time to seek it from your inspector or from you.

EPA is planning significant improvements for the PCS system that will be implemented in the next few years. These improvements should allow us to issue modified permits and DMRs concurrently. Until then we appreciate your assistance and patience in this effort.

***Phil Garwood***

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

**IN THE MATTER OF**

| | | | |
|---|---|---|---|
| S. D. WARREN COMPANY | | ) | MAINE POLLUTANT DISCHARGE |
| SKOWHEGAN, SOMERSET COUNTY, MAINE | | ) | ELIMINATION SYSTEM PERMIT |
| PULP & PAPER MANUFACTURING FACILITY | | ) | AND |
| ME0021521 | | ) | WASTE DISCHARGE LICENSE |
| W000385-5N-G-R | **APPROVAL** | ) | **RENEWAL** |

Pursuant to the provisions of the Federal Water Pollution Control Act, Title 33 USC, Section 1251, et. seq., and Maine Law 38 M.R.S.A., Section 414-A et. seq., and all applicable regulations, the Department of Environmental Protection (Department) has considered the application of S. D. WARREN COMPANY (SDW), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

**APPLICATION SUMMARY:**

The Somerset mill of the SDW (dba SAPPI Fine Paper) has filed an application with the Department to renew State Waste Discharge License (WDL) #W000385-44-C-R that was issued on May 1, 1995 and expired on May 1, 2000. It is noted the May 1, 1995 WDL was modified by the issuance of WDL #W000385-44-D-M dated December 29, 1995, modified again by the issuance of WDL #W000385-44-E-M dated March 19, 1996, modified again by the issuance of WDL #W000385-5N-F-M dated October 21, 1998.

The SDW Somerset mill located in both Skowhegan and Fairfield, Maine (with the discharge in Fairfield) manufactures bleached kraft pulp and bleached kraft fine paper. The SDW Somerset mill has applied to the Department for the issuance of a combination Maine Pollutant Discharge Elimination System (MEPDES) permit and Waste Discharge License (WDL) to discharge up to a monthly average of 46.5 million gallons per day (MGD) of treated process and other waste waters associated with the pulp and papermaking process including but not limited to, treated sanitary waste waters, cooling waters, treated landfill leachate, treated residuals storage pad leachate, leachate from Waste Management's Crossroad commercial landfill in Norridgewock, waste from an on-site precipitated calcium carbonate plant and storm water from various areas of the mill complex to the Kennebec River. The mill produces approximately 2,350 tons/day of fine bleached kraft paper from hardwood and softwood pulp. The mill produced an average of 1,525 tons/day of unbleached kraft pulp that resulted in the production of 1,449 tons/day of bleached kraft pulp for the period calendar years 1999 – 2001 inclusively.

**PERMIT SUMMARY**

On January 12, 2001, the Department received authorization from the U.S. Environmental Protection Agency (EPA) to administer the National Pollutant Discharge Elimination System (NPDES) program in Maine. From this point forward, the program will be referred to as the MEPDES program and will utilize a permit number of #ME0021521 (same as the NPDES permit) as a reference number for SDW's MEPDES permit.

This permit is significantly different than the effective NPDES permit issued by the EPA in 1987 and the effective WDL issued by the State of Maine in 1995 subsequently modified on December 29, 1995, March 19, 1996, March 23, 1998 and October 21, 1998. An on-site precipitated calcium carbonate (PCC) plant was constructed in 1998. Notice of this activity was made by SDW on March 11, 1998 and acknowledgement of the proposed change was made by the Department on March 23, 1998. This permit includes requirements pursuant to federal regulation found at 40 Code of Federal Regulation (CFR) Part 430 and is often referred to as the "Cluster Rule." The regulation was promulgated by the EPA in April of 1998.

Terms and conditions being carrying forward from WDL #W000385-44-C-R dated May 1, 1995 and subsequent WDL modifications cited above include:

1. The monthly average flow limit of 46.5 MGD for Outfall #001.

2. The seasonal daily maximum and monthly average mass limits for biochemical oxygen demand ($BOD_5$) and total suspended solids (TSS) for Outfall #001.

3. The seasonal daily maximum temperature limit of 105°F for Outfall #001.

4. The pH range limitation for Outfall #001.

5. The quarterly average color limit of 175 lbs/ton of unbleached pulp produced for Outfall #001.

6. The daily maximum concentration limit of <10 pg/L for 2,3,7,8 TCDD (dioxin) and 2,3,7,8 TCDF (furan) in the bleach plant effluent, Outfall #100, an internal waste stream for the mill.

7. The annual testing requirement for whole effluent toxicity (WET) and chemical specific (priority pollutant) testing for Outfall #001.

8. The condition exempting the permittee from monitoring for chlorophenolics for Outfall #001 based on the fact the permittee has filed the appropriate certifications stating that chlorophenolics are not being utilized as a biocide in the mill processes.

**PERMIT SUMMARY** (cont'd)

This permit is different from WDL #W000385-44-C-R dated May 1, 1995 and subsequent WDL modifications previously cited in that it:

9. Establishes a seasonal weekly rolling average and a daily maximum temperature difference limitation expressed in degrees Fahrenheit (°F).

10. Removes the monthly average mass and concentration limitations and 1/Quarter monitoring requirement for aluminum.

11. Establishes monthly average and daily maximum mass limits for adsorbable organic halides (AOX) for Outfall #001.

12. Establishes a monthly average and daily maximum mass reporting requirement for chemical oxygen demand (COD) for Outfall #001.

13. Establishes daily maximum concentration limits for 12 chlorinated phenolic compounds for the bleach plant, Outfall #100.

14. Establishes monthly average and daily maximum mass limits for chloroform for the bleach plant, Outfall #100.

15. Requires the permittee to monitor bald eagle nests, collect bird samples and conduct analytical analyses and band chicks.

16. Requires the permittee to develop, implement, and periodically update a Best Management Plan (BMP) for the mill operations.

17. Establishes limitations and monitoring requirements for five storm water outfalls.

18. Establishes a seasonal (June 1 – September 30) monitoring requirement for total phosphorus.

19. Includes a Special Condition requiring the permittee to conduct an evaluation of the existing storm water detention/sedimentation ponds.

**CONCLUSIONS**

BASED on the findings in the attached Fact Sheet dated April 2, 2002 (revised July 18, 2003 and September 11, 2003 ) and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 M.R.S.A., Section 464(4)(F), will be met, in that:

   (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

**ACTION**

THEREFORE, the Department APPROVES the above noted application of the S.D. WARREN COMPANY, to discharge up to a monthly average of 46.5 million gallons per day (MGD) of treated process and other waste waters associated with the pulp and papermaking process including but not limited to, treated sanitary waste waters, cooling waters, treated landfill leachate, treated residuals storage pad leachate, leachate from Waste Management's Crossroad commercial landfill in Norridgewock, waste from an on-site precipitated calcium carbonate plant and storm water from various areas of the mill complex to the Kennebec River, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations including:

1. "Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable To All Permits," revised July 1, 2002, copy attached.

2. The attached Special Conditions, including effluent limitations and monitoring requirements.

3. The term of this permit is five (5) years from the date of signature.

DONE AND DATED AT AUGUSTA, MAINE, THIS 12 DAY OF September 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Dawn R Gallagher
Dawn Gallagher, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application April 14, 2000.

Date of application acceptance April 14, 2000.

Date filed with Board of Environmental Protection

FILED
SEP 17 2003
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

This order prepared by GREGG WOOD, BUREAU OF LAND AND WATER QUALITY
W03855ng 9/12/03

## SPECIAL CONDITION

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning with the effective date of this permit and lasting through permit expiration, the permittee is authorized to discharge secondary treated waste waters, including bleach plant effluent (internal waste stream) from Outfall #100, to the Kennebec River. Such discharges shall be limited and monitored by the permittee as specified below. The italicized numeric values in brackets in the table below and the tables that follow are not limitations but are code numbers used by Department personnel to code Discharge Monitoring Reports (DMR's).

**OUTFALL #001 – Secondary treated waste waters**

| Effluent Characteristic | Discharge Limitations | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|
| | Monthly Average lb/day | Daily Maximum lb/day | Monthly Average as specified | Weekly Average as specified | Daily Maximum as specified | Measurement Frequency as specified | Sample Type as specified |
| low (MGD) *[50050]* | --- | --- | 46.5 MGD *[03]* | --- | Report MGD *[03]* | Continuous *[CN]* | Recorder*[RC]* |
| $OD_5$ *[00310]* | | | | | | | |
| *June 1 – September 30* | 9,400 #/day | 16,600 #/day | --- | --- | --- | 1/Day | Composite |
| *October 1 – May 31* | 14,850 #/day *[26]* | 32,670 #/day *[26]* | --- | --- | --- | 1/Day *[01/01]* | Composite *[24]* |
| SS *[00530]* | | | | | | | |
| *June 1 – September 30* | 30,000 #/day | 50,000 #/day | --- | --- | --- | 1/Day | Composite |
| *October 1 – May 31* | 41,820 #/day *[26]* | 77,850 #/day *[26]* | --- | --- | --- | 1/Day *[01/01]* | Composite *[24]* |
| emperature *[00011]* | | | | | | | |
| *June 1 – September 30* | --- | --- | --- | --- | 105°F *[15]* | 1/Day *[01/01]* | Measure *[MS]* |
| *October 1 – May 31* | --- | --- | --- | --- | Report °F *[15]* | 1/Week *[01/07]* | Measure *[MS]* |
| emperature Difference *[70013]* *une 1 – September 30* | --- | --- | --- | 0.4°F[1] *[15]* | 0.5°F[2] *[15]* | 1/Day*[01/01]* | Calculate *[CA]* |
| H (Std. Unit) *[00400]* | --- | --- | --- | --- | 5.0 – 9.0 SU *[12]* | 1/Day *[01/01]* | Grab *[GR]* |

## SPECIAL CONDITIONS

### A. OUTFALL #001 – Secondary treated waste waters (cont'd)

| Effluent Characteristic | Discharge Limitations | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|
| | Monthly Average | Daily Maximum | Monthly Average | Weekly Average | Daily Maximum | Measurement Frequency | Sample Type |
| | lb/day | lb/day | as specified | as specified | as specified | as specified | as specified |
| Color[3] *[00084]* | 175 lbs/ton *[42]* | --- | --- | --- | --- | 3/Week *[03/07]* | Calculate *[CA]* |
| Adsorbable Organic Halides[4] AOX) *[03594]* | 1,900 #/Day *[26]* | 2,900 #/Day *[26]* | --- | --- | --- | 3/Week *[03/07]* | Composite *[24]* |
| Chemical Oxygen Demand(COD) *31017]* | Report (#/Day) *[26]* | Report (#/Day) *[26]* | --- | --- | --- | 1/Day *[01/01]* | Composite *[24]* |
| Total Phosphorus *[00665]* *June 1 – September 30* | Report #/day *[26]* | Report #/day *[26]* | Report ug/L *[19]* | --- | Report ug/L *[19]* | 1/Week *[01/07]* | Grab *[GR]* |

***SURVEILLANCE LEVEL TESTING – Beginning upon permit issuance and lasting through 12 months prior to permit expiration.***

| Effluent Characteristic | Discharge Limitations | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|
| | Monthly Average as specified | Daily Maximum as specified | Monthly Average as specified | Daily Maximum as specified | Measurement Frequency as specified | Sample Type as specified |
| Whole Effluent Toxicity (WET)[5] | | | | | | |
| A-NOEL | | | | | | |
| *Ceriodaphnia dubia [TDA3B]* | --- | --- | --- | Report % *[23]* | 1/Year *[01/YR]* | Composite *[24]* |
| *Pimephales promelas [TDA6C]* | ---- | --- | --- | Report % *[23]* | 1/Year *[01/YR]* | Composite *[24]* |
| C-NOEL | | | | | | |
| *Ceriodaphnia dubia [TBP3B]* | --- | --- | --- | Report % *[23* | 1/Year *[01/YR]* | Composite *[24]* |
| *Pimephales promelas [TBP6C]* | --- | --- | --- | Report % *[23]* | 1/Year *[01/YR]* | Composite *[24]* |
| Chemical Specific[6] *50008]* | --- | --- | --- | Report ug/L *[28]* | 1/Year *[01/YR]* | Composite/ Grab *[24/GR]* |

## SPECIAL CONDITIONS

### A. OUTFALL #001 – Secondary treated waste waters (cont'd)

***SCREENING LEVEL TESTING – Beginning twelve months prior to expiration date of the permit.***

| Effluent Characteristic | Discharge Limitations | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|
| | Monthly Average as specified | Daily Maximum as specified | Monthly Average as specified | Daily Maximum as specified | Measurement Frequency as specified | Sample Type as specified |
| Whole Effluent Toxicity (WET) [5] | | | | | | |
| A-NOEL | | | | | | |
| *Ceriodaphnia dubia [TDA3B]* | --- | --- | --- | Report % [23] | 1/Quarter [01/90] | Composite [24] |
| *Salvelinus fontinalis [TDA6F]* | --- | --- | --- | Report % [23] | 2/Year [02/YR] | Composite [24] |
| *Pimephales promelas [TDA6C]* | --- | --- | --- | Report % [23] | 2/Year [02/YR] | Composite [24] |
| C-NOEL | | | | | | |
| *Ceriodaphnia dubia [TBP3B]* | --- | --- | --- | Report % [23] | 1/Quarter [01/90] | Composite [24] |
| *Salvelinus fontinalis [TBQ6F]* | --- | --- | --- | Report % [23] | 2/Year [02/YR] | Composite [24] |
| *Pimephales promelas [TBP6C]* | --- | --- | --- | Report % [23] | 2/Year [02/YR] | Composite [24] |
| Chemical Specific [6] [50008] | --- | --- | --- | Report ug/L [28] | 1/Quarter [01/90] | Composite/ Grab [24/GR] |

## SPECIAL CONDITIONS
## A. OUTFALL #100 (Bleach Plant)

| Effluent Characteristic | Discharge Limitations | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|
| | Monthly Average as specified | Daily Maximum as specified | Monthly Average as specified | Daily Maximum as specified | Measurement Frequency as specified | Sample Type as specified |
| Flow [50050] | --- | --- | Report MGD [03] | Report MGD [03] | 1/Day [01/01] | Measure [MS] |
| 2,3,7,8 TCDD (Dioxin)[7] [34675] | --- | --- | --- | <10 pg/L[8] [3L] | 1/Month [01/30] | Composite [24] |
| 2,3,7,8 TCDF (Furan)[7] [38691] | --- | --- | --- | <10 pg/L[8] [3L] | 1/Month [01/30] | Composite [24] |
| Trichlorosyringol[9] [73054] | --- | --- | --- | <2.5 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| 3,4,5-Trichlorocatechol[9] [73037] | --- | --- | --- | <5.0 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| 3,4,,6- Trichlorocatechol[9] [51024] | --- | --- | --- | <5.0 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| 3,4,5-Trichloroguaiacol[9] [61024] | --- | --- | --- | <2.5 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| 3,4,6-Trichloroguaiacol[9] [51022] | --- | --- | --- | <2.5 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| 4,5,6-Trichloroguaiacol[9] [73088] | --- | --- | --- | <2.5 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| 2,4,5-Trichlorophenol[9] [61023] | --- | --- | --- | <2.5 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| 2,4,6-Trichlorophenol[9] [34621] | --- | --- | --- | <2.5 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| Tetrachlorocatechol[9] [79850] | --- | --- | --- | <5.0 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| Tetrachloroguaiacol[9] [73047] | --- | --- | --- | <5.0 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| 2,3,4,6-Tetrachlorophenol[9] [77770] | --- | --- | --- | <2.5 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| Pentachlorophenol[9] [39032] | --- | --- | --- | <5.0 ug/L[8] [28] | 1/Month [01/30] | Composite [24] |
| Chloroform[10] [32106] | 12.6 #/day [26] | 21.1 #/day [26] | --- | --- | 1/Week [01/07] | Grab [24] |

## SPECIAL CONDITIONS

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

### Outfall #001

Footnotes:

Sampling and analysis must be conducted in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services.

(1) **Temperature Difference** (Increase of the ambient receiving water temperature) – This is a weekly rolling average limitation when the receiving water temperature is ≥66°F and <73°F. See Special Condition I, *Temperature Difference*, of this permit for the equation to calculate the predicted river temperature increase (PRTI).

(2) **Temperature Difference** (Increase of the ambient receiving water temperature) - This is a daily maximum limitation when the receiving water temperature is ≥73°F. See Special Condition I, *Temperature Difference,* of this permit for the equation to calculate the PRTI.

(3) **Color** – The limitation is a calendar quarterly average limitation. Quarterly results shall be reported in the monthly DMR's for the months of March, June, September and December of each calendar year. The permittee shall monitor the true color (at a pH of 7.6 S.U) in the effluent from Outfall #001 at a minimum of three (3) times per week. See Special Condition H, *Color,* of this permit for reporting requirements. The calculated mass discharged, expressed as lbs/ton of unbleached pulp produced, shall be based on air-dried tons of brown stock entering the bleach plant. A color pollution unit is equivalent to a platinum cobalt color unit as described in NCASI Technical Document #253. The mass of color is defined as the number of color pollution units multiplied by the volume of effluent discharged in million gallons per day multiplied by 8.34.

(4) **AOX** - The analytical method to be used to determine adsorbable organic halides shall be EPA Method 1650 for which a ML (Minimum Level) of 20 ug/l shall be attained. The ML is defined as the level at which the analytical system gives recognizable signals and an acceptable calibration point. The mass discharged shall be based on air-dried tons of brown stock entering the bleach plant at the stage where chlorine based compounds are first added.

## SPECIAL CONDITIONS

### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

**Outfalls#001**

Footnotes:

(5) **WET** - Definitive WET testing is a multi-concentration testing event (a minimum of five dilutions set at levels to bracket the acute and chronic critical water quality thresholds dilution factors of 3.7% and 3.0 % respectively), which provides a point estimate of toxicity in terms of No Observed Effect Level, commonly referred to as NOEL or NOEC. A-NOEL is defined as the acute no observed effect level with survival as the end point. C-NOEL is defined as the chronic no observed effect level with survival, reproduction and growth as the end points.

**Beginning upon issuance of the permit and lasting through 12 months prior to the expiration date of the permit**, the permittee shall initiate surveillance level WET testing at a frequency of 1/Year on the water flea (*Ceriodaphnia dubia*) and the fathead minnow (*Pimephales promelas*). The permittee shall conduct a WET test in a different calendar quarter each year such that a test is conducted in each of the four calendar quarters during the term of the permit. Results shall be reported to the Department within 30 days of the permittee receiving the test results from the laboratory conducting the testing.

**Beginning twelve months prior to the expiration date of the permit**, the permittee shall initiate screening level WET tests at a frequency of 1/Quarter (four consecutive calendar quarters). Testing shall be conducted on the water flea (*Ceriodaphnia dubia*) and the fathead minnow (*Pimephales promelas*) in two of the four calendar quarters and conducted on the water flea (*Ceriodaphnia dubia*) and the brook trout (*Salvelinus fontinalis*) in the remaining two of the four calendar quarters. Results shall be reported to the Department within 30 days of the permittee receiving the test results from the laboratory conducting the testing.

Toxicity tests must be conducted by an experienced laboratory approved by the Department. The laboratory must follow procedures as described in the following U.S.E.P.A. methods manuals.

a. Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms, 4th Edition, October 2002, EPA-821-R-02-013.

b. Methods for Measuring the Acute Toxicity of Effluent and Receiving Waters to Freshwater and Marine Organisms, 5th Edition, October 2002, EPA-821-R-02-012.

**The permittee is also required to analyze the effluent for the parameters specified in the analytic chemistry on the form in Attachment A of this permit every time a WET test is performed.**

## SPECIAL CONDITIONS

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

### Outfall #001

Footnotes:

(6) Chemical specific (Priority Pollutant) testing are those parameters listed by the USEPA pursuant to Section 307(a) of the Clean Water Act and published a 40 CFR Part 122, Appendix D, Tables II and III.

**Beginning upon issuance of the permit and lasting through 12 months prior to the expiration date of the permit,** surveillance level chemical specific testing shall be conducted at a frequency of once per year (any calendar quarter). Beginning twelve months prior to the expiration date of the permit, screening level chemical specific testing shall be conducted at a frequency of four per year (four consecutive calendar quarters). Chemical specific testing shall be conducted on samples collected at the same time as those collected for whole effluent toxicity tests, where applicable. Chemical specific testing shall be conducted using methods that permit detection of a pollutant at existing levels in the effluent or that achieve minimum reporting levels of detection as specified by the Department. Results shall be reported to the Department within 30 days of the permittee receiving the test results from the laboratory conducting the testing. For the purposes of DMR reporting, enter a "NODI-9" for no testing done this monitoring period or "1" for yes, testing done this monitoring period.

All mercury sampling shall be conducted in accordance with EPA's "clean sampling techniques" found in EPA Method 1669, Sampling Ambient Water For Trace Metals At EPA Water Quality Criteria Levels. All mercury analysis shall be conducted in accordance with EPA Method 1631, Determination of Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Fluorescence Spectrometry.

(7) **2,3,7,8 TCDD (Dioxin) & 2,3,7,8 TCDF (Furan)** – The analytical method to be used to determine the concentrations of dioxin and furan shall be EPA Method 1613B.

### Outfall #100

(8) **Minimum Levels (ML's)** - The limitations established in this permitting action for dioxin, furan and the 12 chlorinated phenolic compounds are equivalent to the ML's established for EPA Methods 1613 and 1653 respectively. Compliance will be based on the ML's as listed in Special Condition A of this permit. Any level of TCDD/TCDF reported below the ML is not quantifiable and is considered an estimate. For the purposes of reporting test results on the monthly DMR, the following format shall be adhered to:

**SPECIAL CONDITIONS**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS** (cont'd)

**Outfall #001**

Footnotes:

*Detectable results* - All detectable analytical test results shall be reported to the Department including results which are detected below the respective ML.

*Non-detectable results* - If the analytical test result is below the respective ML, the concentration result shall be reported as <X where X is the detection level achieved by the laboratory for each respective parameter.

(9) **12 Chlorinated phenolic compounds** - The analytical method to be used to determine the concentrations of these compounds shall be EPA Method 1653.

(10) **Chloroform** - The preferred analytical method to be used for chloroform is EPA Method 1624B for which a ML of 20 ug/l shall be attained. Other approved EPA methods are 601 and 624, and Standard Method 6210B and 6230B. The permittee must collect separate grab samples from the acid and alkaline bleach plant filtrates for chloroform analysis. Samples to be analyzed for chloroform may be taken over a 32 hour period where a minimum of six (6) grab samples are collected, each grab sample being at least four (4) hours apart but no more than 16 hours apart.

**SPECIAL CONDITION**
**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

**OUTFALLS #002, #003, #004, #005 and #007 – Storm water runoff[1]**

| Effluent Characteristic | Discharge Limitations | | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|
| | Monthly Average[1] lb/day | Daily Maximum lb/day | Monthly Average as specified | Weekly Average as specified | Daily Maximum as specified | Measurement Frequency as specified | Sample Type as specified |
| Flow (MGD) *[50050]* | --- | --- | Report MGD *[03]* | --- | Report MGD *[03]* | 1/Quarter[2] *[01/90]* | Estimate *[ES]* |
| $BOD_5$ *[00310]* | Report #/Day *[26]* | Report #/day *[26]* | --- | --- | --- | 1/Quarter[2] *[01/90]* | Grab *[GR]* |
| TSS *[00530]* | Report #/Day *[26]* | Report #/day *[26]* | --- | --- | --- | 1/Quarter[2] *[01/90]* | Grab *[GR]* |
| Oil & Grease *[00552]* | --- | --- | --- | --- | Report mg/L *[12]* | 1/Quarter[2] *[01/90]* | Grab *[GR]* |
| pH (Std. Unit) *[00400]* | --- | --- | --- | --- | 5.0 – 9.0 SU *[12]* | 1/Quarter[2] *[01/90]* | Grab *[GR]* |

Footnotes:

(1) **On or before May 1, 2004**, the permittee shall develop, implement and periodically update a Storm Water Pollution Prevention Plan (SWPPP). As the site or any operations conducted on it have changed or are expected to change materially or substantially, the permittee shall modify its SWPPP as necessary to include such changes and notify the Department and the EPA within 90 days of such modifications to the plan. The permittee shall maintain a copy of the SWPPP and any subsequent revisions at the mill and shall make the plan available to any Department or EPA representative upon request.

The SWPPP requirements are intended to facilitate a process whereby the permittee thoroughly evaluates potential pollution sources at the mill and selects and implements appropriate measures to prevent or control the discharge of pollutants in storm water runoff. The process involves the following four steps: (1) formation of a team of qualified facility personnel who will be responsible for preparing the SWPPP and assisting the environmental manager in its implementation; (2) assessment of potential storm water pollution sources; (3) selection and implementation of appropriate management practices and controls; and (4) periodic evaluation of the effectiveness of the plan to prevent storm water contamination and comply with the terms and conditions of the permit.

(2) Report quarterly average figures. In the event of an on-site spill that makes its way to a detention pond(s), the permittee shall initiate sampling of the discharge from the detention pond outlet(s) as soon as they are aware of the spill followed by sampling of at least 1/Day thereafter until the risk of any pass-through of the spilled material ceases.

## SPECIAL CONDITIONS

### B. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain a visible oil sheen, foam, or floating solids at any time which would impair the usages designated by the classification of the receiving waters.

2. The effluent shall not contain materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the usages designated by the classification of the receiving waters.

3. The effluent shall not cause visible discoloration or turbidity in the receiving water which would impair the usages designated by the classification of the receiving waters.

4. Notwithstanding specific conditions of the permit, the effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

5. The permittee shall not use chlorophenolic-containing biocides.

### C. TREATMENT PLANT OPERATOR

The waste water treatment facility must be operated by a person holding a **Grade V** certificate or a State of Maine professional engineer license pursuant to Title 32 M.R.S.A., Section 4171 et seq. All proposed contracts for facility operation by any person must be approved by the Department before the permittee may engage the services of the contract operator.

### D. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee shall notify the Department of the following:

1. Any substantial change (realized or anticipated) in the volume or character of pollutants being introduced into the waste water collection and treatment system.

2. For the purposes of this section, adequate notice shall include information on:

   a. The quality and quantity of waste water introduced to the waste water collection and treatment system; and

   b. Any anticipated change in the quality and quantity of the waste water to be discharged from the treatment system.

## SPECIAL CONDITIONS

### E. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from Outfalls #001, #002, #003, #004, #005, #006, #007 and #100 (internal waste stream). Discharges of waste water from any other point source are not authorized under this permit, but shall be reported in accordance with Standards Condition B(5)(Bypass) of this permit.

### F. REOPENING OF PERMIT FOR MODIFICATIONS

Upon evaluation of the tests results specified by the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at anytime and with notice to the permittee, modify this permit to: 1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded: (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

### G. MONITORING AND REPORTING

Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13$^{th}$) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15$^{th}$) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the following address:

Maine Department of Environmental Protection
Central Maine Regional Office
Bureau of Land & Water Quality
State House Station #17
Augusta, ME. 04333

### H. COLOR

The permittee is required to report daily average color discharged for a calendar quarter expressed as pounds per day. The permittee is required to report the daily average color discharged for a calendar quarter expressed as pounds of color per ton of unbleached pulp produced. Supporting calculations, in the format illustrated on the following page must accompany the DMR reports for March, June, September and December of each calendar year.

## SPECIAL CONDITIONS

### H. COLOR (cont'd)

| Quarter Sample Date | #001 Flow (mgd) | Color Conc (cpu) | Mass (lbs/day) | Unbleached Pulp Production tons/day |
|---|---|---|---|---|
| xx/xs/xx | 35 | 716 | 201,000 | 1,400 |
| xx/xs/xx | 38 | 700 | 201,844 | 1,450 |
| ..... | | | | |
| xx/xs/xx | 37 | 695 | 204,463 | 1,425 |
| Quarterly Average | | | X=202,435 | X=1,425 |

Quarterly average mass per ton = 202,435/1,425 = 142 lbs color/ton

### I. TEMPERATURE DIFFERENCE

During the period June 1 to September 30, when the ambient receiving water temperature is $\geq$66°F and <73°F, the permittee is limited to a thermal discharge that will not increase the ambient receiving water temperature by more than 0.4°F based on a weekly (7 days) rolling average calculation. When the ambient receiving water temperature is $\geq$73°F, the permittee is limited to a thermal discharge that will not increase the ambient receiving water temperature by more than 0.5°F based on a daily calculation. For each operating day during the applicable limitation period, the permittee shall calculate the Predicted River Temperature Increase (PRTI) associated with the thermal discharge from Outfall #001 according to the following equation:

$$PRTI\ (^{\circ}F) = \frac{Qe\ (Te - Tr)}{Qr}$$

where,

Qr = Ambient receiving water flow in gpd or MGD (must be like units as Qe)
Qe = Effluent flow in gpd or MGD (must be like units as Qr)
Te = Effluent temperature in °F
Tr = Ambient receiving water (mill intake) temperature in °F

Receiving water flow measurements (Qr) shall be obtained from Florida Power and Light's (FPL) Weston Station located in the Town of Skowhegan. The permittee shall adhere to mathematical protocols for significant figures and rounding the calculated PRTI values. All PRTI values reported to the Department on the monthly Discharge Monitoring Reports (DMRs) for compliance with the weekly rolling average and daily maximum $\Delta$T limitations of 0.4°F and 0.5°F respectively, shall be rounded to the nearest 0.1°F.

## SPECIAL CONDITIONS

### I. TEMPERATURE DIFFERENCE (cont'd)

Between June 1 and September 30 of each year, the permittee shall monitor the discharge from Outfall #001 and the ambient receiving waters on a daily basis for the parameters in the equation on the previous page. The daily recorded and calculated values shall be reported to the Department as an attachment to the DMRs for the months of June, July, August and September of each year.

Example DMR Reporting Form Attachment

| Date | Qr (MGD) | Qe (MGD) | Tr(°F) | Te(°F) | PRTI(°F) |
|---|---|---|---|---|---|
| 6/1/02 | 1,544 | 25.2 | 67 | 91 | 0.4 |
| 6/2/02 | 1,710 | 23.8 | 67 | 89 | 0.3 |

### J. OPERATION & MAINTENANCE (O&M) PLAN

The waste water treatment facility at the Somerset mill shall have a current written comprehensive Operation & Maintenance (O&M) Plan. The plan shall provide a systematic approach by which the permittee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

**By December 31 of each year (beginning December 31, 2004),** or within 90 days of any process changes or minor equipment upgrades, the permittee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the waste water treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and EPA personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility, the permittee shall submit the updated O&M Plan to their Department inspector for review and comment.

### K. DIOXIN – FISH TISSUE

**As of December 31, 2002,** SDW's Somerset mill was not authorized to discharge dioxin into its receiving waters and must demonstrate so through monitoring of the bleach plant effluent and fish tissue sampling or surrogate test approved by the Department. Pursuant to Maine law, 38 M.R.S.A., §420(2)(I)(3), a mill is considered to have discharged dioxin into its receiving waters if 2, 3, 7, 8 - tetrachlorodibenzo-p-dioxin or 2, 3, 7, 8 - tetrachlorodibenzo-p-furan is detected in any of the mill's internal waste streams of its bleach plant and in a confirmatory sample at levels exceeding 10 picograms per liter, unless the Department adopts a lower detection level by rule, which is a routine technical rule pursuant to Title 5, chapter 375, subchapter II-A, or a lower detection level by incorporation of a method in use by the United States Environmental Protection Agency, or if levels of dioxin,

## SPECIAL CONDITIONS

### K. DIOXIN – FISH TISSUE (cont'd)

as defined in section 420-A, subsection 1 detected in fish tissue sampled below the mill's wastewater outfall are higher than levels in fish tissue sampled at an upstream reference site not affected by the mill's waste water discharge or on the basis of a comparable surrogate procedure acceptable to the commissioner. The commissioner shall consult with the technical advisory group established in section 420-B, subsection 1, paragraph B, subparagraph (5) in making this determination and in evaluating surrogate procedures. The fish-tissue sampling test must be performed with differences between the average concentrations of dioxin in the fish samples taken upstream and downstream from the mill measured with at least 95% statistical confidence. If the mill fails to meet the fish-tissue sampling-result requirements in this subparagraph and does not demonstrate by December 31, 2004 to the commissioner's satisfaction that its wastewater discharge is not the source of elevated dioxin concentrations in fish below the mill, then the commissioner may pursue any remedy authorized by law.

### L. BIOLOGICAL MONITORING PROGRAM

The permittee is required to develop and implement an annual biological monitoring plan to monitor the bird species cited in paragraph L(1)(a) below. The monitoring plan will remain in effect until the Department, after consultation with the U.S. Fish & Wildlife Service USF&W and the State's IF&W, formally (in writing) relieves the permittee of their obligation to continue to carry out the plan.

1. **On or before November 1, 2003**, the permittee shall submit to the Department for review and approval, a biological monitoring plan to the monitor the bird specifies listed in paragraph L(1)(a) below. The permittee shall consult with USFWS's Maine Field Office, the USEPA's Region I Maine State Ecosystem Office and the State of Maine Department of Inland Fish & Wildlife's (IF&W) Bangor Office when preparing the monitoring plan. The permittee must receive written approval of said plan from the Department prior to commencing the monitoring. The biological monitoring plan shall include, but not be limited to, the following items:

   a. Bird samples (non-viable eggs and dead young sub-adults or adults) of bald eagles, ospreys, great blue herons and common loons shall be collected when available from nests on the main stem of the Kennebec River and on major tributaries within twenty five (25) mile radius of the SDW Somerset mill and in reference/background areas;

   b. The following environmental contaminants shall be measured in each sample: standard PCDD/F analysis, congener-specific PCB analysis, organochlorine pesticides analysis, and standard metals analysis including lead and mercury;

   c. Aerial and ground based monitoring of eagle nests shall begin during eagle nest occupation, followed by sequential visits to determine the day of egg laying. Aerial surveys shall resume once the eggs are expected to hatch. To identify dead chicks, subsequent flights shall continue until all chicks have fledged;

**SPECIAL CONDITIONS**

**L. BIOLOGICAL MONITORING PROGRAM** (cont'd)

d. If encountered during sample collection, surviving eagle chicks (at least five weeks old) shall be banded;

e. Complete copies of sample analytical reports with QA/QC results will be made available promptly to the Department, USFWS, IF&W and the permittee if the reports are conducted by an entity other than the permittee.

*[Note: sample collectors and analytical laboratories should have the appropriate federal and state scientific and Endangered Species Act (ESA) possession permits.]*

2. **Beginning thirty (30) days after written approval from the Department of the biological monitoring plan**, the permittee shall commence implementation of said plan by conducting the biological sample collection and analysis as specified in paragraph L(1)(a-e) above.

3. **By December 31st of each calendar year**, the permittee shall prepare and provide an annual report to the Department and entities identified in paragraph L(1) above, describing the results of the previous years biological monitoring activities.

4. Alternatively, the permittee may provide funding annually to the Maine IF&W and or USFWS to reimburse said agencies for the cost of developing a biological monitoring plan, surveys, bird sample collections, sample preparations, sample analysis and generation of the report as specified in this Special Condition.

5. The total cost of the monitoring program shall not exceed an annual cap of $10,000.

6. The permittee must meet annually with the Department and entities identified in paragraph L(1) above to discuss results of the previous year's monitoring, plans for the upcoming year's monitoring, the need for continuance of the program and to evaluate progress made by the SDW Somerset mill to reduce loadings consistent with its technology based permit limitations. This special condition expires on the expiration date of the permit thereby limiting the monitoring to a five-year term. Any data/information collected during the term of this permit may be considered during the subsequent permit renewal.

## SPECIAL CONDITIONS

### M. LANDFILL LEACHATE

The permittee is authorized to accept a maximum of 0.2 MGD of landfill leachate and floor drain water from the Waste Management Disposal Services of Maine's facility in Norridgewock, Maine into the aeration basin of its waste water treatment facility. Tests shall be conducted on samples representative of leachate and floor drain waters accepted at the mill and will include the following parameters: pH, oil & grease, total suspended solids, BOD, cadmium, chromium copper, lead, mercury, nickel, zinc, arsenic, barium, selenium, silver, chemical oxygen demand and *E. coli* bacteria.

**The permittee shall periodically (minimum 3/year) submit test results of leachate analysis as an attachment to the corresponding Discharge Monitoring Report.** As an attachment to the test results submitted with the DMR, the permittee shall report the daily maximum and monthly average volumes of leachate received from Waste Management Disposal Services for the corresponding time frame.

### N. DETENTION/SEDIMENTATION PONDS

**By December 31, 2004**, the permittee shall submit to the Department for review and approval, a comprehensive evaluation of the effectiveness of the existing detention/sedimentation ponds. The evaluation shall include, but not limited to, determination of detention times in all five ponds, a comparison to the original design detention times and the potential for improving detention time and reducing short-circuiting in the Number 3 pond. The evaluation shall also include a scope of work and schedule for any recommended corrective actions that are deemed to be necessary and practical to improve the efficiency of ponds without significantly altering the existing natural habitat that presently exists in the ponds.

### O. BEST MANAGEMENT PRACTICES PLAN

1. SPECIALIZED DEFINITIONS.

   a. **Action Level**: A daily pollutant loading that when exceeded triggers investigative or corrective action. Mills determine action levels by a statistical analysis of six months of daily measurements collected at the mill. For example, the lower action level may be the 75th percentile of the running seven-day averages (that value exceeded by 25 percent of the running seven-day averages) and the upper action level may be the 90th percentile of the running seven-day averages (that value exceeded by 10 percent of the running seven-day averages).

   b. **Equipment Items in Spent Pulping Liquor, Soap, and Turpentine Service**: Any process vessel, storage tank, pumping system, evaporator, heat exchanger, recovery furnace or boiler, pipeline, valve, fitting, or other device that contains, processes, transports, or comes into contact with pulping liquor, soap, or turpentine. Sometimes referred to as "equipment items."

## SPECIAL CONDITIONS

### O. BEST MANAGEMENT PRACTICES PLAN (cont'd)

c. **Immediate Process Area**: The location at the mill where pulping, screening, knotting, pulp washing, pulping liquor concentration, pulping liquor processing, and chemical recovery facilities are located, generally the battery limits of the aforementioned processes. "Immediate process area" includes spent pulping liquor storage and spill control tanks located at the mill, whether or not they are located in the immediate process area.

d. **Intentional Diversion**: The planned removal of spent pulping liquor, soap, or turpentine from equipment items in spent pulping liquor, soap, or turpentine service by the mill for any purpose including, but not limited to, maintenance, grade changes, or process shutdowns.

e. **Mill**: The owner or operator of a direct or indirect discharging pulp, paper, or paperboard manufacturing facility subject to this section.

f. **Senior Technical Manager**: The person designated by the mill manager to review the BMP Plan. The senior technical manager shall be the chief engineer at the mill, the manager of pulping and chemical recovery operations, or other such responsible person designated by the mill manager who has knowledge of and responsibility for pulping and chemical recovery operations.

g. **Soap**: The product of reaction between the alkali in kraft pulping liquor and fatty acid portions of the wood, which precipitate out when water is evaporated from the spent pulping liquor.

h. **Spent Pulping Liquor**: For kraft and soda mills "spent pulping liquor" means black liquor that is used, generated, stored, or processed at any point in the pulping and chemical recovery processes. For sulfite mills "spent pulping liquor" means any intermediate, final, or used chemical solution that is used, generated, stored, or processed at any point in the sulfite pulping and chemical recovery processes (e.g., ammonium-, calcium-, magnesium-, or sodium-based sulfite liquors.

i. **Turpentine**: A mixture of terpenes, principally pinene, obtained by the steam distillation of pine gum recovered from the condensation of digester relief gases from the cooking of softwoods by the kraft pulping process. Sometimes referred to as sulfate turpentine.

**SPECIAL CONDITIONS**

**O. BEST MANAGEMENT PRACTICES PLAN** (cont'd)

2. REQUIREMENT TO IMPLEMENT BEST MANAGEMENT PRACTICES.

The permittee must implement the Best Management Practices (BMPs) specified in paragraphs 2(a) through 2(j) (below). BMPs must be developed according to best engineering practices and must be implemented in a manner that takes into account the specific circumstances at each mill. The BMPs are as follows:

a. The permittee must return spilled or diverted spent pulping liquors, soap, and turpentine to the process to the maximum extent practicable as determined by the mill, recover such materials outside the process, or discharge spilled or diverted material at a rate that does not disrupt the receiving wastewater treatment system.

b. The permittee must establish a program to identify and repair leaking equipment items. This program must include:

(i) Regular visual inspections (e.g., once per day) of process areas with equipment items in spent pulping liquor, soap, and turpentine service;

(ii) Immediate repairs of leaking equipment items, when possible. Leaking equipment items that cannot be repaired during normal operations must be identified, temporary means for mitigating the leaks must be provided, and the leaking equipment items repaired during the next maintenance outage;

(iii) Identification of conditions under which production will be curtailed or halted to repair leaking equipment items or to prevent pulping liquor, soap, and turpentine leaks and spills; and

(iv) A means for tracking repairs over time to identify those equipment items where upgrade or replacement may be warranted based on frequency and severity of leaks, spills, or failures.

c. The permittee must operate continuous, automatic monitoring systems that the mill determines are necessary to detect and control leaks, spills, and intentional diversions of spent pulping liquor, soap, and turpentine. These monitoring systems should be integrated with the mill process control system and may include, e.g., high level monitors and alarms on storage tanks; process area conductivity (or pH) monitors and alarms; and process area sewer, process wastewater, and wastewater treatment plant conductivity (or pH) monitors and alarms.

## SPECIAL CONDITIONS

### O. BEST MANAGEMENT PRACTICES PLAN (cont'd)

d. The permittee must establish a program of initial and refresher training of operators, maintenance personnel, and other technical and supervisory personnel who have responsibility for operating, maintaining, or supervising the operation and maintenance of equipment items in spent pulping liquor, soap, and turpentine service. The refresher training must be conducted at least annually and the training program must be documented and made available to Department and EPA personnel for inspection upon request.

e. The permittee must prepare a brief report that evaluates each spill of spent pulping liquor, soap, or turpentine that is not contained at the immediate process area and any intentional diversion of spent pulping liquor, soap, or turpentine that is not contained at the immediate process area. The report must describe the equipment items involved, the circumstances leading to the incident, the effectiveness of the corrective actions taken to contain and recover the spill or intentional diversion, and plans to develop changes to equipment and operating and maintenance practices as necessary to prevent recurrence. The reports shall be made available to Department and EPA personnel for inspection upon request. Discussion of the reports must be included as part of the annual refresher training.

f. The permittee must establish a program to review any planned modifications to the pulping and chemical recovery facilities and any construction activities in the pulping and chemical recovery areas before these activities commence. The purpose of such review is to prevent leaks and spills of spent pulping liquor, soap, and turpentine during the planned modifications, and to ensure that construction and supervisory personnel are aware of possible liquor diversions and of the requirement to prevent leaks and spills of spent pulping liquors, soap, and turpentine during construction.

g. The permittee must install and maintain secondary containment (i.e., containment constructed of materials impervious to pulping liquors) for spent pulping liquor bulk storage tanks equivalent to the volume of the largest tank plus sufficient freeboard for precipitation. An annual tank integrity testing program, if coupled with other containment or diversion structures, may be substituted for secondary containment for spent pulping liquor bulk storage tanks.

h. The permittee must install and maintain secondary containment for turpentine bulk storage tanks.

i. The permittee must install and maintain curbing, diking or other means of isolating soap and turpentine processing and loading areas from the wastewater treatment facilities.

j. The mill must conduct wastewater monitoring to detect leaks and spills, to track the effectiveness of the BMPs, and to detect trends in spent pulping liquor losses. Such monitoring must be performed in accordance with paragraph 7.

**SPECIAL CONDITIONS**

**O. BEST MANAGEMENT PRACTICES PLAN** (cont'd)

3. AMENDMENT OF BMP PLAN.

   a. The permittee must amend its BMP Plan whenever there is a change in mill design, construction, operation, or maintenance that materially affects the potential for leaks or spills of spent pulping liquor, turpentine, or soap from the immediate process areas.

   b. **The permittee must complete a review and evaluation of the BMP Plan five years after the first BMP Plan is prepared and, except as provided in paragraph D.(1) (above), once every five years thereafter.** As a result of this review and evaluation, the permittee must amend the BMP Plan within three months of the review if the mill determines that any new or modified management practices and engineered controls are necessary to reduce significantly the likelihood of spent pulping liquor, soap, and turpentine leaks, spills, or intentional diversions from the immediate process areas, including a schedule for implementation of such practices and controls.

4. REVIEW AND CERTIFICATION OF BMP PLAN.

   The BMP Plan, and any amendments, must be reviewed by the senior technical manager at the mill and approved and signed by the mill manager. Any person signing the BMP Plan or its amendments must certify to the Permitting Authority under penalty of law that the BMP Plan (or its amendments) has been prepared in accordance with good engineering practices and in accordance with this regulation. The mill is not required to obtain approval from the Permitting Authority of the BMP Plan or any amendments.

5. RECORD KEEPING REQUIREMENTS

   a. The permittee must maintain on its premises a complete copy of the current BMP Plan and the records specified in paragraph 5(b) (below) and must make such BMP Plan and records available to the Permitting Authority or his or her designee for review upon request.

   b. The mill must maintain the following records for three years from the date they are created:

      (i) Records tracking the repairs performed in accordance with the repair program described in paragraph 2(b);

      (ii) Records of initial and refresher training conducted in accordance with paragraph 2(d);

      (iii) Reports prepared in accordance with paragraph 2(e) of this section; and

      (iv) Records of monitoring required by paragraphs 2(j) and 7.

**SPECIAL CONDITIONS**

**O. BEST MANAGEMENT PRACTICES PLAN** (cont'd)

6. ESTABLISHMENT OF WASTEWATER TREATMENT SYSTEM INFLUENT ACTION LEVELS.

   a. The permittee must conduct a monitoring program, described in paragraph 6(b), for the purpose of defining wastewater treatment system influent characteristics (or action levels), described in paragraph 6(c), that will trigger requirements to initiate investigations on BMP effectiveness and to take corrective action.

   b. The permittee must employ the following procedures in order to develop the required action levels:

      (i) Monitoring parameters. The permittee must collect 24-hour composite samples and analyze the samples for a measure of organic content (e.g., Chemical Oxygen Demand (COD) or Total Organic Carbon (TOC)). Alternatively, the permittee may use a measure related to spent pulping liquor losses measured continuously and averaged over 24 hours (e.g., specific conductivity or color). **[Note: The permittee must receive Department approval prior to using these alternative monitoring parameters (e.g. specific conductivity, color, etc.)]**

      (ii) Monitoring locations. For direct dischargers, monitoring must be conducted at the point influent enters the wastewater treatment system. For indirect dischargers monitoring must be conducted at the point of discharge to the POTW. For the purposes of this requirement, the permittee may select alternate monitoring point(s) in order to isolate possible sources of spent pulping liquor, soap, or turpentine from other possible sources of organic wastewaters that are tributary to the wastewater treatment facilities (e.g., bleach plants, paper machines and secondary fiber operations). The permittee shall maintain an up-to-date schematic depicting the monitoring locations for Department and EPA personnel upon request.

   c. The permittee must complete an initial six-month monitoring program using the procedures specified in paragraph 6(b) and must establish initial action levels based on the results of that program. A wastewater treatment influent action level is a statistically determined pollutant loading determined by a statistical analysis of six months of daily measurements. The action levels must consist of a lower action level, which if exceeded will trigger the investigation requirements described in paragraph 7, and an upper action level, which if exceeded will trigger the corrective action requirements described in paragraph 7.

   d. The permittee must complete a second six-month monitoring program using the procedures specified in paragraph G(2) of this section and must establish revised action levels based on the results of that program. The initial action levels shall remain in effect until replaced by revised action levels.

**SPECIAL CONDITIONS**

**O. BEST MANAGEMENT PRACTICES PLAN** (cont'd)

e. Action levels developed under this paragraph must be revised using six months of monitoring data after any change in mill design, construction, operation, or maintenance that materially affects the potential for leaks or spills of spent pulping liquor, soap, or turpentine from the immediate process areas.

7. MONITORING, CORRECTIVE ACTION, AND REPORTING REQUIREMENTS.

a. The permittee must conduct daily monitoring of the influent to the wastewater treatment system in accordance with the procedures described in paragraph 6(b) for the purpose of detecting leaks and spills, tracking the effectiveness of the BMPs, and detecting trends in spent pulping liquor losses.

b. Whenever monitoring results exceed the lower action level for the period of time specified in the BMP Plan, the permittee must conduct an investigation to determine the cause of such exceedence. Whenever monitoring results exceed the upper action level for the period of time specified in the BMP Plan, the permittee must complete corrective action to bring the wastewater treatment system influent mass loading below the lower action level as soon as practicable.

c. Although exceedence of the action levels will not constitute violations of the permit, failure to take the actions required by paragraph 7(b) as soon as practicable will be a violation.

d. The permittee must report to the Department the results of the daily monitoring conducted pursuant to paragraph 7(a). Such reports must include a summary of the monitoring results, the number and dates of exceedence(s) of the applicable action levels, and brief descriptions of any corrective actions taken to respond to such exceedence. **The reports shall be submitted to the Department no later than January 31 of the following year.**

# ATTACHMENT A

# FRESHWATER WHOLE EFFLUENT TOXICITY (WET) TEST REPORT

Facility _____ DEP License No _____ NPDES permit No _____

Contact person _____ Telephone No _____

Date initially sampled _____ (mm/dd/yy) Date tested _____ (mm/dd/yy) Chlorinated? _____

Test type screening _____ surveillance _____ Dechlorinated? _____

Results % effluent

| | Water flea | Trout | Fathead |
|---|---|---|---|
| LC50 | | | |
| A-NOEL | | | |
| C-NOEL | | | |

DEP/EPA
Test required by: _____

Receiving Water Concentration

| | |
|---|---|
| A-NOEL | |
| C-NOEL | |

Data summary

| | water flea | | | tro ut | | | fat head | | |
|---|---|---|---|---|---|---|---|---|---|
| | % survival | | no. young | % survival | | final wt (mg) | % survival | | final wt (mg) |
| QC standard | A>90 | C>80 | >15/female | A>90 | C>80 | >2% increase | A>89 | C>79 | >0.25 |
| lab control | | | | | | | | | |
| river water control | | | | | | | | | |
| conc. 1 ( %) | | | | | | | | | |
| conc. 2 ( %) | | | | | | | | | |
| conc. 3 ( %) | | | | | | | | | |
| conc. 4 ( %) | | | | | | | | | |
| conc. 5 ( %) | | | | | | | | | |
| conc. 6 ( %) | | | | | | | | | |
| stat test used | | | | | | | | | |

place * next to values statistically different from controls for trout show final wt and % incr for both controls

Reference toxicant

| | water flea | | tro ut | | fat head | |
|---|---|---|---|---|---|---|
| | LC50/A-NOEL | C-NOEL | LC50/A-NOEL | C-NOEL | LC50/A-NOEL | C-NOEL |
| toxicant / date | | | | | | |
| limits (mg/l) | | | | | | |
| results (mg/l) | | | | | | |

Comments _____

**Laboratory Conducting Test. To the best of my knowledge this information is true, accurate, and complete**

signature _____ company _____

printed name _____ address _____

tel. no. _____

Report analytical chemistry on reverse side.

ANALYTICAL CHEMISTRY RESULTS
FRESHWATER TESTS

Date collected _____ mm/dd/yy  Date analyzed _____ mm/dd/yy

Lab ID No. _____

| Analyte | Report Units | Results receiving water | Results effluent | Detection level | Method |
|---|---|---|---|---|---|
| Alkalinity | mg/L | | | mg/L | |
| Ammonia nitrogen | µg/L | | | µg/L | |
| Specific conductance | µmhos | | | µmhos | |
| Total residual chlorine | mg/L | | | mg/L | |
| Total organic carbon | mg/L | | | mg/L | |
| Total solids | mg/L | | | mg/L | |
| Total suspended solids | mg/L | | | mg/L | |
| Total aluminum | µg/L | | | µg/L | |
| Total cadmium | µg/L | | | µg/L | |
| Total calcium | mg/L | | | mg/L | |
| Total chromium | µg/L | | | µg/L | |
| Total copper | µg/L | | | µg/L | |
| Total hardness | mg/L | | | mg/L | |
| Total lead | µg/L | | | µg/L | |
| Total magnesium | µg/L | | | µg/L | |
| Total nickel | µg/L | | | µg/L | |
| Total zinc | µg/L | | | µg/L | |
| other ( pH ) | S.U. | | | S.U. | |
| other ( ) | | | | | |

Comments _____

**Laboratory conducting test. To the best of my knowledge this information is true, accurate, and complete**

signature _____ lab name _____

printed name _____ address _____

tel. no. _____